

## **WOVEN BAND HAVING COLD LIGHT EFFECT**

### **FIELD OF THE INVENTION**

The present invention relates to a knitting band and particularly to a knitting band that includes luminescent cold  
5 light fibers to enable the woven band body illuminate colored cold light.

### **BACKGROUND OF THE INVENTION**

In recent years cold light fibers have become increasingly popular because they can generated uniform light on the entire  
10 surface without irritating eyes and are a light source without harmful effect. Cold light is a short wave light with a strong converging property. It is brilliant and distinguishable, especially at night. It also consumes little electric power and is a power saving product (some products even use battery to  
15 supply power).

Because of the aforesaid advantages, many cold light products have been developed, such as shoelaces, woven bands, hats, belts, and the like. They mainly aim to use the strong light converging property of cold light to generate  
20 brilliant and noticeable light at night. For youth market that is fashion conscious and capricious in terms of consumption behavior, the products, aside from providing the indigenous functions, also have to create fresh feel and stylish look to stimulate purchase. The cold light feature can increase product  
25 utilization value in the industry.

Conventional cold light band ornaments for shoes generally are made by stitching a cold light strip on a woven band to enable the woven band to illuminate colored light from the surface, and generate brilliant and distinguishing luminescent effect at night. However, due to the cold light strip has to be stitched onto a woven band, it cannot be too narrow. Moreover, stitching operation has to use stitching yarns to pierce through the surface of the cold light strip that generate holes which destroy the structure of the cold light strip. In addition, stitching operation is labor intensive. It is tedious and time-consuming.

### **SUMMARY OF THE INVENTION**

Therefore the primary object of the invention is to resolve the aforesaid disadvantages and overcome the drawbacks of the prior art. The invention provides a woven band equipped with cold light effect. It includes one or more cold light fiber in preset warp yarns when the fabric is woven by warp yarns and weft yarns. Hence the woven band body has one or more cold light fiber exposed on the surface after finished to display colored light as desired.

The foregoing, as well as additional objects, features and advantages of the invention will be more readily apparent from the following detailed description, which proceeds with reference to the accompanying drawings.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a schematic front view of an embodiment of the

invention.

FIG. 2 is another schematic front view of an embodiment of the invention.

FIG. 3 is a cross section of a cold light fiber of the invention.

5 **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Please referring to FIGS. 1 and 2, the woven band having cold light effect of the invention includes a woven band body 10 which is woven by a plurality of warp yarns 11 and weft yarns 12. One of the warp yarns 11 is a cold light fiber 13 which consists of a metal core 132 in the center surrounding by a cover layer 131 made from a cold light material (as shown in FIG. 3). Upon the core 132 is energized by electricity, the cover layer 131 can generate colored light. The cold light fiber 13 is preset among the warp yarns 11 and is woven into the woven band body 10 through a weft yarn shuttle. The cold light fiber 13 is woven on the front and rear surface of the woven band body 10 at a desired interval to form a woven product of a desired width embedded with the cold light fiber 13.

In addition, the cold light fiber 13 of the invention may also be wound around a shuttle of the weft yarns (not shown in the drawings). During weaving, the cold light fiber 13 may be woven transversely into the woven band body 10 at a desired width interval.

The woven band body 10 thus made has the following advantages:

1. It does not need time-consuming and tedious stitching operation. One or more cold light fiber 13 may be woven into the woven band body 10 during the warp yarns 11 and weft yarns 12 are woven. The finished woven band body 10 has one or more cold light fiber 13 laid on the surface in an integrated manner. There is no need for manual stitching operation, thus can save fabrication cost.
2. It eliminates the problem of stitching narrow cold light strips. As the woven band body 10 is formed by weaving the warp yarns 11 and weft yarns 12, and the cold light fiber 13 may be woven with the warp yarns 11 regardless its size, and the cold light fiber 13 can be laid on the surface of the finished woven band body 10. Thus the problem associated with stitching narrow cold light strips is eliminated.

In summary, the woven band body 10 formed by the invention can be used as a fundamental ornament band to be widely used on shoe vamps. As their surface is attached to the cold light fiber 13, they can illuminate colored light at night to enhance visual effect. It also can be used on hats or clothes to provide alarm and security function. Of course, the invention may also be woven in large size fabrics.